Claims

1. An ultraviolet radiation absorbing coating system comprising a first inner synthetic resinous layer having an ultraviolet radiation absorber having an ultraviolet cutoff lower than about 385 nanometers, and a fluorescent material which reflects ultraviolet radiation of wave length above 385 nanometers; and a second outer layer overlying said first inner layer and having an ultraviolet radiation absorbent material which blocks at least some ultraviolet radiation of wavelength above 385 nm to reduce reflection in said fluorescent material.

2. A system in accordance with claim 1, in which said first and second layers are applied to oppositely disposed surfaces of a synthetic resinous film.

3. A system in accordance with claim 2, in which said film includes an adhesive on an exposed surface of said first layer for application to a printed surface of a protected substrate.

4. An ultraviolet absorbing coating system in accordance with claim 1, including first and second inner and outer coatings of the following formulation.

Inner Coating

Ratios are based on weight
Solvents are used to dilute this coating formulation to achieve a 9 – 10 micron film thickness for this example. Various surfactants are used for leveling.

Acryloid A 21 – (Rohm & Haas)	84.03 % by weight total solids
Uvitex OB (Ciba-Geigy)	9.24 % by weight total solids
Tinuvin 328 (Ciba Geigy)	6.73 % by weight total solids

Outer Coating

The second coating is the outer layer coating which should be 3 -4 microns in this example. Solvents are used to dilute the solids to achieve the desired film thickness. Various catalysts and leveling agents are used to cure and level the coating.

GR 653 polysiloxane resin (Techneglas)	97% by weight of total solids
Tinuvin 328 (Ciba Geigy)	3% by weight of total solids

5. An ultraviolet absorbing coating system in accordance with claim 1, including first and second inner and outer coatings of the following formulation. Parts are by weight of solids.

	Inner Coating
Acryloid A 21 – (Rohm & Haas)	84.03 % weight solids
Uvitex OB (Ciba-Geigy)	9.24 % weight solids
Tinuvin 328 (Ciba Geigy)	6.73 % weight solids

	Outer Coating
Desmodur N -75 (Bayer)	34.88 % weight solids
Desmophen 670A – 80 (Bayer)	62.02% weight solids
Dibutyltindilaurate (Pfaltz & Bauer)	0.1% weight solids
Tinuvin 328 (Ciba Geigy)	3.0% weight solids

6. An ultraviolet absorbing coating system in accordance with claim 1, said first and second coatings having the following formulation:

Inner Coating

Water is the diluent for this coating formulation. Various surfactants and leveling agents are used to improve adhesion and leveling.

Johncryl 537 (Johnson's Wax)	77.52% weight solids
Uvinul D 40 (Basf Wyndotte)	6.2 % by weight solids
Triethanolamine (Pfaltz & Bauer)	7.75% by weight liquid
OBA Quencher (Kalamazoo Chemical)	8.53% weight solids

Outer Coating

SHC 4000 (General Electric)	97% weight solids
Tinuvin 328 (Ciba Geigy)	3% weight solids